Listing of Claims:

Claims 1-59 (Cancelled).

60. (Previously presented) A method of forming a microlens array for use in an imaging device, said method comprising the steps of:

providing a substrate having an array of pixel sensor cells formed thereon and a protective layer over the cells;

forming a spacer layer in contact with the protective layer;

forming a lens forming layer over and in contact with the spacer layer;

forming a microlens array from said lens forming layer; and

forming a radiation transparent insulation layer on said microlens array for increasing the proportion of radiation incident on said pixel sensor cells by extending the light-capturing capabilities beyond a periphery area surrounding each individual microlens of said microlens array, wherein said insulation layer includes silicon insulator material.

61. (Original) The method of claim 60, wherein the substrate further comprises a CMOS pixel array formed thereon.

62. (Original) The method of claim 60, wherein the substrate further comprises a CCD pixel array formed thereon.

63. (Original) The method of claim 60, wherein said step of forming the lens forming layer comprises a spin-coating process.

64. (Original) The method of claim 60, wherein the lens forming layer is a layer of material selected from the group consisting of optical thermoplastic, polyimide, thermoset resin, photosensitive gelatin, and radiation curable resin.

65. (Original) The method of claim 64, wherein the optical thermoplastic is selected from the group consisting of polymethylmethacrylate, polycarbonate, polyolefin, cellulose acetate butyrate, and polystyrene.

66. (Original) The method of claim 64, wherein the radiation curable resin is selected from the group consisting of acrylate, methacrylate, urethane acrylate, epoxy acrylate, and polyester acrylate.

67. (Original) The method of claim 60, wherein the insulation layer is a layer of material selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

68. (Original) The method of claim 60, wherein said insulation layer forming step comprises a chemical vapor deposition step.

69. (Original) The method of claim 60, wherein said insulation layer forming step comprises a low temperature plasma deposition step.

70. (Previously presented) The method of claim 69, wherein said silicon insulator material is formed by a low temperature process operation within the range of approximately 200 to 400 degrees Celsius.

71. (Original) The method according to claim 60, further comprising forming a spacer layer under said microlens array.

72. (Original) The method according to claim 71, wherein said spacer layer has a thickness of from about 1 μm to about 20 μm.

73. (Previously presented) A method of forming a microlens array for use in an imaging device, said method comprising the steps of:

forming a lens forming layer on an imaging device;

treating said lens forming layer to form a plurality of microlenses; and

depositing a radiation transparent insulation layer on each microlens for increasing the proportion of radiation incident on said pixel sensor cells by capturing light from beyond the periphery of each individual microlens of said microlens array, wherein said insulation layer includes silicon insulator material.

74. (Original) The method of claim 73, wherein the lens forming layer is a layer of material selected from the group consisting of optical thermoplastic, polyimide, thermoset resin, photosensitive gelatin, and radiation curable resin.

75. (Original) The method of claim 74, wherein the optical thermoplastic is selected from the group consisting of polymethylmethacrylate, polycarbonate, polyolefin, cellulose acetate butyrate, and polystyrene.

76. (Original) The method of claim 74, wherein the radiation curable resin is selected from the group consisting of acrylate, methacrylate, urethane acrylate, epoxy acrylate, and polyester acrylate.

77. (Original) The method of claim 73, wherein said treating step comprises a baking step.

78. (Original) The method of claim 77, wherein said baking step is carried out at a temperature within the range of approximately 100 to 350 degrees Celsius.

79. (Original) The method of claim 73, wherein said treating step comprises a radiation exposure step.

80. (Original) The method of claim 73, wherein the insulation layer is a layer of silicon oxide.

81. (Original) The method of claim 73, wherein the insulation layer is a layer of silicon nitride.

82. (Original) The method of claim 73, wherein the insulation layer is a layer of silicon oxynitride.

83. (Original) The method of claim 73, wherein said insulation layer forming step comprises a chemical vapor deposition step.

Claim 84 (Cancelled).

85. (Original) The method according to claim 73, further comprising forming a spacer layer under said lens forming layer before formation of said lens forming layer.

86. (Original) The method according to claim 85, wherein said spacer layer has a thickness of from about 1 μm to about 20 μm.

87. (Previously presented) A method of forming a microlens array for use in an imaging device, said method comprising the steps of:

forming a lens forming layer of radiation curable resin on an imaging device;

patterning said lens forming layer to form a plurality of lens forming regions;

treating said plurality of lens forming regions with a radiation exposure step to form a plurality of microlenses; and

forming a radiation transparent insulation layer on the plurality of microlenses for increasing the proportion of radiation incident on said pixel sensor cells by capturing light from beyond the periphery of each microlens of said plurality of microlenses, wherein said insulation layer includes silicon insulator material.

Claim 88 (Cancelled).

89. (Original) The method of claim 87, wherein the substrate further comprises a CMOS pixel array formed thereon.

90. (Original) The method of claim 87, wherein the substrate further comprises a CCD pixel array formed thereon.

Claims 91-93 (Cancelled).

94. (Original) The method of claim 87, wherein the insulation layer is a layer of material selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

95. (Original) The method of claim 87, wherein said insulation layer forming step comprises a chemical vapor deposition step.

96. (Original) The method of claim 87, wherein said insulation layer forming step comprises a plasma deposition step carried out at a temperature within the range of approximately 200 to 400 degrees Celsius.

97. (Original) The method according to claim 87, further comprising forming a spacer layer under said lens forming layer before formation of said lens forming layer.

98. (Original) The method according to claim 97, wherein said spacer layer has a thickness of from about 1 μm to about 20 μm.

99. (Previously presented) A method of forming a microlens array for use in an imaging device, said method comprising the steps of:

forming a lens forming layer on an imaging device, wherein the lens forming layer is a layer of material selected from the group consisting of optical thermoplastic, polyimide, and thermoset resin;

patterning said lens forming layer to form a plurality of lens forming regions;

heat treating said plurality of lens forming regions to form a plurality of microlenses; and

depositing a radiation transparent insulation layer on the plurality of microlenses for extending the light-capturing capabilities beyond the periphery of each individual microlens of said plurality of microlenses, wherein said insulation layer includes silicon insulator material.